

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION**

OCEAN SEMICONDUCTOR LLC

Civil Action No. 6:22-cv-00200

Plaintiff,

v.

NVIDIA CORPORATION

JURY TRIAL DEMANDED

Defendant.

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Ocean Semiconductor LLC (“Ocean Semiconductor” or “Plaintiff”) files this Complaint against NVIDIA Corporation (“NVIDIA” or “Defendant”), seeking damages and other relief for patent infringement, and alleges with knowledge to its own acts, and on information and belief as to other matters, as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

THE PARTIES

2. Plaintiff Ocean Semiconductor is a limited liability company organized and existing under the laws of the State of Delaware, and its registered agent for service of process in Delaware is Rita Carnevale, 717 N. Union Street, Wilmington, DE 19805.

3. On information and belief, Defendant NVIDIA is a corporation organized and existing under the laws of Delaware, with its principal place of business at 2701 San Tomas

Expressway, Santa Clara, CA 95050. NVIDIA is registered with the State of Texas and may be served with process through its registered agent, Corporation Service Company d/b/a CSC-Lawyers Incorporating Service Company, 211 E. 7th St., Suite 620, Austin, TX 78701. On information and belief, NVIDIA has a regional office in this District, including at least at 11001 Lakeline Blvd., Building 2, Suite 100, Austin, TX 78717.

4. On information and belief, Defendant NVIDIA sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial District, and introduces infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial District and elsewhere in the United States.

5. Plaintiff Ocean Semiconductor is the assignee and owner of the patents at issue in this action: U.S. Patents Nos. 7,005,376; 7,307,322; and 7,629,211 (collectively, the “Asserted Patents”). Ocean Semiconductor holds all substantial rights, title, and interest in the Asserted Patents, including the exclusive right to sue NVIDIA for infringement and recover damages, including damages for past infringement.

6. Plaintiff Ocean Semiconductor seeks monetary damages and prejudgment interest for Defendant’s past and ongoing direct and indirect infringement of the Asserted Patents.

7. Defendant NVIDIA is a semiconductor company that designs, develops, sells, offers to sell, and imports into the United States semiconductor products in the communications, internet of things, automotive, computer, and consumer electronics industries (“Accused Products”).

8. Defendant NVIDIA, which has its own design centers in the United States (including a facility in Austin, Texas), contracts with third-party semiconductor fabricators or foundries (“NVIDIA Foundry Partners”) that own, operate, and/or control semiconductor

fabrication plants (“fabs”) within and/or outside of the United States (“International Facilities”) to produce the Accused Products. One such NVIDIA Foundry Partner is Taiwan Semiconductor Manufacturing Company Ltd. (“TSMC”). *See, e.g.*, “NVIDIA and TSMC Ship One-Billionth GeForce Graphics Processor,” available at <https://www.chipestimate.com/NVIDIA-and-TSMC-Ship-One-Billionth-GeForce-Graphics-Processor/TSMC/news/8288> (last accessed February 24, 2022); “TSMC expects record revenue from NVIDIA Turing GPU production,” available at <https://hardwaresfera.com/en/noticias/hardware/tsmc-espera-ingresos-record-gracias-la-produccion-de-las-gpu-turing-de-nvidia/> (last accessed February 24, 2022); “NVIDIA Corp.’s Relationship With Taiwan Semiconductor Manufacturing Is Deepening,” available at <https://www.fool.com/investing/2017/05/17/nvidia-corp-relationship-taiwan-semiconductor.aspx> (last accessed February 24, 2022); “Nvidia: TSMC Remains Our Primary Manufacturing Partner for 16nm FinFETs and 10nm,” available at <https://wccftech.com/nvidia-tsmc-official-partner-16nm-finfet-10nm/> (last accessed February 24, 2022); “TSMC Gives NVIDIA Priority for 28 nm Manufacturing,” available at <https://www.techpowerup.com/165707/tsmc-gives-nvidia-priority-for-28-nm-manufacturing> (last accessed February 24, 2022). TSMC has a contractual partnership with NVIDIA to design, develop, or manufacture semiconductor products including integrated circuits for NVIDIA.

9. On information and belief, Defendant NVIDIA (directly or through one or more of its Foundry Partners such as TSMC) designs, develops and/or manufactures one or more systems, products, devices, and integrated circuits for importation into the United States for use, sale, and/or offer for sale in this District and throughout the United States, including, but not limited to, GEFORCE RTX 20 SERIES models (including, but not limited to, GEFORCE RTX 2060, 2060 SUPER, 2070, 2070 SUPER, 2080, 2080 SUPER, and 2080 Ti), GEFORCE GTX 16 SERIES

models (including, but not limited to, GEFORCE GTX 1650, 1650 SUPER, 1650 Ti, 1660, 1660 Super, and 1660 Ti), TITAN models (including, but not limited to TITAN RTX models), QUADRO models (e.g., QUADRO T400, T500, T600, T1000, T4000, T5000, and T8000 models), products incorporating NVIDIA's Turing architecture, products manufactured using, for example, TSMC's 12nm FinFET manufacturing process, and similar products, devices, systems, components of systems, and/or integrated circuits ("NVIDIA Accused Products"). *See, e.g.*, <https://www.nvidia.com/en-us/geforce/graphics-cards/compare/?section=compare-20> (accessed February 24, 2022); <https://images.nvidia.com/aem-dam/en-zz/Solutions/design-visualization/technologies/turing-architecture/NVIDIA-Turing-Architecture-Whitepaper.pdf> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/geforce-rtx-2080-ti.c3305> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/geforce-rtx-2080-super.c3439> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/geforce-rtx-2080.c3224> (February 24, 2022); <https://www.techpowerup.com/gpu-specs/geforce-rtx-2070-super.c3440> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/nvidia-tu104.g854> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/geforce-rtx-2070.c3252> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/nvidia-tu106.g875> (accessed February 24, 2022); [https://www.techpowerup.com/gpu-specs/nvidia-tu102.g813#:~:text=NVIDIA's%20TU102%20GPU%20uses%20the,Ultimate%20\(Feature%20Level%2012.2\)](https://www.techpowerup.com/gpu-specs/nvidia-tu102.g813#:~:text=NVIDIA's%20TU102%20GPU%20uses%20the,Ultimate%20(Feature%20Level%2012.2)) (accessed February 24, 2022); <https://www.techpowerup.com/review/nvidia-geforce-turing-geforce-rtx-architecture/2.html> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/nvidia-tu117.g881#:~:text=NVIDIA's%20TU117%20GPU%20uses%20the,CUDA%207.5%20can%20>

[be%20used](https://www.techpowerup.com/gpu-specs/ geforce-gtx-1650.c3366) (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/ geforce-gtx-1650.c3366> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/ geforce-gtx-1650-super.c3411> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/ geforce-gtx-1650-ti-mobile.c3512> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/ geforce-gtx-1660.c3365> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/ geforce-gtx-1660-super.c3458> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/ geforce-gtx-1660-ti.c3364> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/titan-rtx.c3311> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/t400.c3808> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/t500-mobile.c3747> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/t600.c3796> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/t1000.c3797> (accessed February 24, 2022); <https://www.techpowerup.com/gpu-specs/quadro-rtx-4000-mobile.c3430> (February 24, 2022); <https://www.techpowerup.com/gpu-specs/quadro-rtx-5000-mobile.c3431> (February 24, 2022); <https://www.techpowerup.com/gpu-specs/quadro-rtx-8000.c3306> (accessed February 24, 2022); <https://www.anandtech.com/show/13249/nvidia-announces-geforce-rtx-20-series-rtx-2080-ti-2080-2070> (accessed February 24, 2022); <https://www.pcgamer.com/rtx-2080-everything-you-need-to-know/> (accessed February 24, 2022); <https://images.nvidia.com/aem-dam/en-zz/Solutions/design-visualization/technologies/turing-architecture/NVIDIA-Turing-Architecture-Whitepaper.pdf> (accessed February 24, 2022); <https://www.notebookcheck.net/NVIDIA-GeForce-GTX-1660-Ti-Laptop-Graphics-Card.386426.0.html> (accessed February 24, 2022); <https://www.anandtech.com/show/15010/the-nvidia-geforce-gtx-1660-super-review-feat-evga>

(accessed February 24, 2022); <https://www.pcgamer.com/nvidia-geforce-gtx-1660-review/> (accessed February 24, 2022);

JURISDICTION AND VENUE

10. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1, *et seq.*, including 35 U.S.C. §§ 271, 281, 283, 284, and 285.

11. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

12. NVIDIA is subject to this Court's general personal jurisdiction at least because NVIDIA is a resident of Texas as defined by Texas law.

13. NVIDIA is additionally subject to this Court's general and specific personal jurisdiction because NVIDIA has sufficient minimum contacts within the State of Texas and this District, pursuant to due process and/or the Texas Long Arm Statute, Tex. Civ. Prac & Rem. Code § 17.042. On information and belief, NVIDIA committed the tort of patent infringement in the State of Texas and this District; NVIDIA purposefully availed itself of the privileges of conducting business in the State of Texas and this District; NVIDIA regularly conducts and solicits business within the State of Texas and this District; and NVIDIA designs, develops, manufactures, distributes, makes available, imports, sells, and offers to sell products and services throughout the United States, including in this District, and introduces infringing products and services into that stream of commerce knowing that they would be used and sold in this District and elsewhere in the United States.

14. Venue is proper in this Court pursuant to 28 U.S.C. § 1391 and 1400(b). NVIDIA is subject to personal jurisdiction in this District and a substantial part of the events giving rise to Ocean Semiconductor's claims against NVIDIA occurred and continue to occur in this District.

NVIDIA has a regular and established place of business in this District—including at least its regional office at 11001 Lakeline Blvd., Building 2, Suite 100, Austin, TX 78717—and its acts of infringement have taken place and are continuing to take place in this District.

15. On information and belief, NVIDIA employs engineers in this District to design and develop products, devices, systems, and/or components of systems, including GPU products, that are accused of infringing one or more claims of the Asserted Patents. *See, e.g.*, <https://nvidia.wd5.myworkdayjobs.com/NVIDIAExternalCareerSite/1/refreshFacet/318c8bb6f553100021d223d9780d30be> (showing NVIDIA’s ongoing efforts to hire engineers in Austin, Texas) (accessed February 24, 2022). On information and belief, NVIDIA conducts software and hardware development, marketing, and promotion activities with respect to NVIDIA products that infringe one or more claims of the Asserted Patents.

16. Further, NVIDIA has regularly made new product announcements in the state of Texas and this District. For example, on May 6, 2016, NVIDIA selected a forum in this judicial district to announce and offer for sale certain NVIDIA graphics cards. Specifically, NVIDIA’s co-founder and CEO Jensen Huang promoted NVIDIA products, including the NVIDIA GeForce GTX 1080 graphics card, at the Austin Convention Center located at 500 East Cesar Chavez Street, Austin, TX, 78701, in this judicial district. Mr. Huang demonstrated and touted the capabilities of the GeForce GTX 1080 product. NVIDIA also demonstrated for the first time the GeForce GTX 1070.

17. Additionally, NVIDIA—directly or through intermediaries (including distributors, retailers, and others), subsidiaries, alter egos, and/or agents—ships, distributes, offers for sale, and/or sells its products in the United States and this District. NVIDIA has purposefully and voluntarily placed one or more of its infringing products into the stream of commerce with the

awareness and/or intent that they will be purchased by consumers in this District. On information and belief, NVIDIA knowingly and purposefully ships infringing products into, and within, this District through an established distribution channel. These infringing products have been, and continue to be, purchased by consumers and businesses in this District.

THE PATENTS-IN-SUIT

A. U.S. Patent No. 7,005,376

18. U.S. Patent No. 7,005,376 (“the ’376 Patent”), titled “Ultra-Uniform Silicides in Integrated Circuit Technology,” issued on February 28, 2006. Ocean Semiconductor owns all rights and title to the ’376 Patent, as necessary to bring this action and to recover past, present, and future damages for NVIDIA’s infringement of the ’376 patent. A true and correct copy of the ’376 Patent is attached as Exhibit 1.

19. The ’376 patent discloses methods, systems, and devices related to silicidation in semiconductor devices. Semiconductor devices are made by forming integrated circuits comprising millions of transistors on a silicon substrate. Semiconductor transistors include source/drain junctions and a gate separated by substrate material. Metal contacts are formed in the integrated circuit to reach the source/drain junctions and gate of the transistors. Transition materials called “silicides” are formed between the metal contacts and the source/drain junctions and gate in a process known as “silicidation.” The ’376 patent discloses methods that overcome problems with existing silicidation techniques, including by reducing high electrical resistance between the metal contacts and the silicide through the formation of ultra-uniform silicides between the metal contacts and the source/drain junctions and gate.

20. For example, the ’376 patent discloses a method of forming an integrated circuit comprising: providing a semiconductor substrate; forming a gate dielectric on the semiconductor

substrate; forming a gate over the gate dielectric, forming source/drain junctions in the semiconductor substrate, forming ultra-uniform silicides on the source/drain junctions, depositing a dielectric layer above the semiconductor substrate; and forming contacts in the dielectric layer to the ultra-uniform silicides.

21. The '376 patent claims patent-eligible subject matter and is valid and enforceable.

B. U.S. Patent No. 7,307,322

22. U.S. Patent No. 7,307,322 ("the '322 Patent"), titled "Ultra-Uniform Silicides in Integrated Circuit Technology," issued on December 11, 2007. Ocean Semiconductor owns all rights and title to the '322 Patent, as necessary to bring this action and to recover past, present, and future damages for Defendant NVIDIA's infringement of the '322 patent. A true and correct copy of the '322 Patent is attached as Exhibit 2.

23. The '322 patent discloses methods, systems, and devices related to siliciding in semiconductor devices. Semiconductor devices are made by forming integrated circuits comprising millions of transistors on a silicon substrate. Semiconductor transistors include source/drain junctions and a gate separated by substrate material. Metal contacts are formed in the integrated circuit to reach the source/drain junctions and gate of the transistors. Transition materials called "silicides" are formed between the metal contacts and the source/drain junctions and gate in a process known as "siliciding." The '322 patent discloses integrated circuits that overcome problems with existing siliciding techniques, including integrated circuits that have reduced electrical resistance between the metal contacts and the silicide and include ultra-uniform silicides between the metal contacts and the source/drain junctions and gate.

24. For example, the '322 patent discloses an integrated circuit comprising: a semiconductor substrate having source/drain junctions; a gate dielectric on the semiconductor

substrate; a gate over the gate dielectric; ultra-uniform silicides on the source/drain junctions; a dielectric layer above the semiconductor substrate; and contacts in the dielectric layer to the ultra-uniform silicides.

25. The '322 patent claims patent-eligible subject matter and is valid and enforceable.

C. U.S. Patent No. 7,629,211

26. U.S. Patent No. 7,629,211 ("the '211 Patent"), titled "Field Effect Transistor and Method of Forming a Field Effect Transistor," issued on December 8, 2009. Ocean Semiconductor owns all rights and title to the '211 Patent, as necessary to bring this action and to recover past, present, and future damages for Defendant NVIDIA's infringement of the '211 patent. A true and correct copy of the '211 Patent is attached as Exhibit 3.

27. The '211 patent discloses methods, systems, and devices related to the formation of integrated circuits, in particular, field effect transistors comprising a strain-creating element formed adjacent to a gate electrode. Field effect transistors are used as switching elements in integrated circuits and provide a means to control current flowing through a channel region between source and drain regions. Conductivity in the channel region is controlled by a gate voltage applied to a gate electrode. The conductivity of the channel region depends on the mobility of the charge carriers in the channel region, such that an increase in charge carrier mobility leads to an increase of the channel conductivity. One way to increase charge carrier mobility is to modify the lattice structure of the channel region by creating tensile or compressive strain using strain-creating elements adjacent the gate electrode. The '211 patent discloses methods of forming field effect transistors that overcome problems with existing strain-creating techniques, including methods that avoid or reduce the effects of strain relaxation that may occur in strain creating elements and result in reduced charge mobility.

28. For example, the '211 patent discloses a method of forming a field effect transistor, comprising: providing a semiconductor substrate, a gate electrode being formed above said semiconductor substrate; forming at least one cavity in said substrate adjacent said gate electrode; and forming a strain-creating element in said at least one cavity, said strain-creating element comprising: a compound material comprising a first chemical element and a second chemical element, wherein said first chemical element comprises one of germanium and carbon, said second chemical element comprises silicon, and said semiconductor substrate comprises said second chemical element; a first portion and a second portion, wherein said second portion is located above said first portion; a first concentration ratio between a concentration of said first chemical element in said first portion and a concentration of said second chemical element in said first portion; and a second concentration ratio between a concentration of said first chemical element in said second portion and a concentration of said second chemical element in said second portion, wherein said first concentration ratio is smaller than said second concentration ratio and wherein a ratio between a concentration of said first chemical element and a concentration of said second chemical element increases in a vertical direction with increasing distance from a bottom surface of said at least one cavity formed in said substrate.

29. The '211 patent claims patent-eligible subject matter and is valid and enforceable.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 7,005,376

30. Ocean Semiconductor incorporates by reference the foregoing paragraphs of this Complaint as if fully set forth herein.

31. At least as of the date of service of this Complaint, Ocean Semiconductor placed NVIDIA on actual notice of the '376 patent and actual notice that its actions constituted and continued to constitute infringement of the '376 patent. NVIDIA has had actual knowledge of the '376 patent and its own infringement of the '376 patent since at least that time.

32. On information and belief, NVIDIA has directly infringed and continues to infringe at least claim 1 of the '376 patent literally or under the doctrine of equivalents, by importing into the United States, and/or using, and/or selling, and/or offering for sale in the United States, without authority or license, integrated circuits that are designed, developed, fabricated, and/or manufactured by a process including all of the limitations of at least claim 1 of the '376 patent, and systems, products, and/or devices containing these integrated circuits including at least the NVIDIA Accused Products ("376 Accused Products") in violation of 35 U.S.C. § 271. The '376 Accused Products are manufactured by a process including all of the limitations of at least claim 1 of the '376 patent.

33. Discovery is expected to uncover the full extent of NVIDIA's infringement of the '376 patent beyond the '376 Accused Products already identified herein.

34. Specifically, on information and belief, NVIDIA has directly infringed and continues to infringe at least claim 1 of the '376 patent literally or under the doctrine of equivalents, by importing into the United States, and/or using, and/or selling, and/or offering for sale in the United States, without authority or license, the '376 Accused Products, in violation of 35 U.S.C. § 271(g). On information and belief, NVIDIA imports the '376 Accused Products into the United States for sale and distribution to customers located in the United States. On information and belief, NVIDIA sells and/or offers for sale the '376 Accused Products in the United States. For example, NVIDIA provides direct sales through its own sales channels and/or its distributors or contract manufacturers and sells the '376 Accused Products to businesses including original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales of the '376 Accused Products in the United States. On information and belief, NVIDIA offers the '376 Accused Products for sale in the United States.

For example, NVIDIA engages in sales, marketing, and contracting activity in the United States and/or with United States offices of its customers.

35. The '376 Accused Products are manufactured by a process including all of the limitations of at least claim 1 of the '376 patent. For example, during the manufacture of the '376 Accused Products, a semiconductor substrate is provided, a gate dielectric is formed on the semiconductor substrate, and a gate is formed over the gate dielectric. Source/drain junctions are formed in the semiconductor substrate, and ultra-uniform silicides are formed on the source/drain junctions. A dielectric layer is deposited above the semiconductor substrate, and contacts are formed in the dielectric layer to the ultra-uniform silicides.

36. Attached hereto as Exhibit 4, and incorporated by reference herein, is a claim chart detailing how the NVIDIA GeForce RTX 2070 Super (TU104 GPU based on Turing architecture and made using a 12 nm production process at TSMC), which is manufactured by a NVIDIA Foundry Partner (TSMC) on behalf of NVIDIA, satisfies each element of at least claim 1 of the '376 patent, literally or under the doctrine of equivalents. On information and belief, the other '376 Accused Products are also manufactured by a NVIDIA Foundry Partner (e.g., TSMC) on behalf of NVIDIA and satisfy each element of at least claim 1 of the '376 patent, literally or under the doctrine of equivalents.

37. On information and belief, the '376 Accused Products are neither materially changed by subsequent processes nor become trivial and nonessential components of another product.

38. On information and belief, at least as of the date of service of this Complaint, NVIDIA has induced and continues to induce others actively, knowingly, and intentionally, including its suppliers and contract manufacturers, to infringe one or more claims of the '376

patent, including, but not limited to, claim 1, pursuant to 35 U.S.C. § 271(b), by actively encouraging others to import into the United States, and/or make, use, sell, and/or offer to sell in the United States, the '376 Accused Products or products containing the infringing semiconductor components of the '376 Accused Products, by actively inducing others to infringe the '376 patent by making, using, selling, offering for sale, marketing, advertising, and/or importing the Accused Products to their customers for use in downstream products that infringe, or were manufactured using processes that infringe, the '376 patent, and by instructing others to infringe the '376 patent.

39. For example, NVIDIA actively promotes the sale, use, and importation of the '376 Accused Products in marketing materials, technical specifications, data sheets, web pages on its website (e.g., www.nvidia.com), press releases, training tutorials, development and design tools, user manuals, and developer forums as well as at trade shows (e.g., the Consumer Technology Association's Consumer Electronics Show ("CES")) and NVIDIA's online Discussion Forums for GeForce products and developers) and through its sales and distribution channels that encourage infringing uses, sales, offers to sell, and importation of the '376 Accused Products. As another example, NVIDIA's representatives travel to customer sites in the United States for sales and support activity that includes working with customers to facilitate these customers' infringing testing, marketing, importation, and sales activity. On information and belief, NVIDIA supplies customers with '376 Accused Products so that they may be used, sold, or offered for sale by those customers. For example, NVIDIA provides direct sales to original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales to customers in the United States. NVIDIA also promotes, publicly on its website, uses of the '376 Accused Products by customers in the United States. NVIDIA additionally provides a wide range of technical support to customers and businesses, including product-specific solutions.

NVIDIA also encourages customers and other third parties to communicate directly with NVIDIA representatives about these products for purposes of technical assistance and repair (e.g., <https://www.nvidia.com/en-us/support/enterprise/> and <https://www.nvidia.com/en-us/support/consumer/>).

40. On information and belief, NVIDIA sells or offers for sale the '376 Accused Products to third parties that incorporate the '376 Accused Products into third party products ("the '376 Third Party Products").

41. On information and belief, NVIDIA assists third parties, directly and/or through intermediaries, in the development of the '376 Third Party Products and provides technical support and supports the sales of the '376 Third Party Products.

42. On information and belief, since at least as of the date of service of this Complaint, NVIDIA has induced and continues to induce third parties with specific intent or willful blindness to import, make, use, sell, and/or offer to sell '376 Third Party Products that include at least one '376 Accused Product, whose make, use, sale, offer for sale, or importation constitutes direct infringement of at least one claim of the '376 patent.

43. On information and belief, the '376 Third Party Products are imported into the United States for use, sale, and/or offer for sale in this District and throughout the United States ("Imported '376 Third Party Products").

44. On information and belief, to the extent any entity other than NVIDIA, including but not limited to any of NVIDIA's Foundry Partners or third-party importers, imports the '376 Accused Products and/or Imported '376 Third-Party Products into the United States for or on behalf of NVIDIA ("Third Party Importer"), NVIDIA is liable for inducement of infringement by the Third Party Importer. NVIDIA has encouraged the Third Party Importer to infringe the '376

patent and intended that it do so. This encouragement includes at least ordering or instructing the Third Party Importer to import the '376 Accused Products and/or '376 Third-Party Products into the United States, providing directions and other materials to the Third Party Importer to enable such importation, and/or conditioning the receipt of benefits (included but not limited to payment) to the Third Party Importer on such importation. On information and belief, this behavior has continued since Defendant first became aware of the '376 patent and the infringement thereof.

45. On information and belief, to the extent any entity other than NVIDIA, including but not limited to any of NVIDIA's Foundry Partners, uses the patented method to fabricate or manufacture the '376 Accused Products and/or Imported '376 Third-Party Products in the United States for or on behalf of NVIDIA ("Third Party Manufacturer"), NVIDIA is liable for inducement of infringement by the Third Party Manufacturer. NVIDIA has encouraged the Third Party Manufacturer to infringe the '376 patent and intended that it do so. This encouragement includes, without limitation, ordering the '376 Accused Products from the Third Party Manufacturer since Defendant first became aware of the '376 patent and its infringement by the Third Party Manufacturer.

46. NVIDIA has benefitted and continues to benefit from the importation into the United States of the '376 Accused Products, '376 Third Party Products, and Imported '376 Third Party Products.

47. Ocean Semiconductor has suffered, and continues to suffer, damages as a result of NVIDIA's infringement of the '376 patent.

48. At least as of the date of service of this Complaint, NVIDIA has infringed the '376 patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights, at least by performing acts of infringement with actual knowledge of its direct and indirect infringement or

while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Plaintiff is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

49. Ocean Semiconductor reserves the right to modify its infringement theories as discovery progresses in this case. Ocean Semiconductor shall not be estopped or otherwise limited or restricted for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Ocean Semiconductor intends for the claim chart (Exhibit 4) for the '376 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Ocean Semiconductor's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 7,307,322

50. Ocean Semiconductor incorporates by reference the foregoing paragraphs of this Complaint as if fully set forth herein.

51. At least as of the date of service of this Complaint, Ocean Semiconductor placed NVIDIA on actual notice of the '322 patent and actual notice that its actions constituted and continued to constitute infringement of the '322 patent. NVIDIA has had actual knowledge of the '376 patent and its own infringement of the '322 patent since at least that time.

52. On information and belief, NVIDIA has directly infringed and continues to infringe at least claim 1 of the '322 patent literally or under the doctrine of equivalents, by importing into the United States, and/or using, and/or selling, and/or offering for sale in the United States, without authority or license, integrated circuits including all of the limitations of at least claim 1 of the '322 patent, and systems, products, and/or devices containing these integrated circuits including

at least the NVIDIA Accused Products (“322 Accused Products”) in violation of 35 U.S.C. § 271. The ’322 Accused Products include all of the limitations of at least claim 1 of the ’376 patent.

53. Discovery is expected to uncover the full extent of NVIDIA’s infringement of the ’322 patent beyond the ’322 Accused Products already identified herein.

54. Specifically, on information and belief, NVIDIA has directly infringed and continues to infringe at least claim 1 of the ’322 patent literally or under the doctrine of equivalents, by importing into the United States, and/or using, and/or selling, and/or offering for sale in the United States, without authority or license, the ’322 Accused Products, in violation of 35 U.S.C. § 271(g). On information and belief, NVIDIA imports the ’322 Accused Products into the United States for sale and distribution to customers located in the United States. On information and belief, NVIDIA sells and/or offers for sale the ’322 Accused Products in the United States. For example, NVIDIA provides direct sales through its own sales channels and/or its distributors or contract manufacturers and sells the ’322 Accused Products to businesses including original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales of the ’322 Accused Products in the United States. On information and belief, NVIDIA offers the ’322 Accused Products for sale in the United States. For example, NVIDIA engages in sales, marketing, and contracting activity in the United States and/or with United States offices of its customers.

55. The ’322 Accused Products include all of the limitations of at least claim 1 of the ’322 patent. For example, the ’322 Accused Products include an integrated circuit comprising a semiconductor substrate having source/drain junctions and a gate dielectric on the semiconductor substrate. The ’322 Accused Products include a gate over the gate dielectric and ultra-uniform silicides on the source/drain junctions. The ’322 Accused Products further include a dielectric

layer above the semiconductor substrate and contacts in the dielectric layer to the ultra-uniform silicides.

56. Attached hereto as Exhibit 5, and incorporated by reference herein, is a claim chart detailing how the NVIDIA GeForce RTX 2070 Super (TU104 GPU based on Turing architecture and made using a 12 nm production process at TSMC), which is manufactured by a NVIDIA Foundry Partner (TSMC) on behalf of NVIDIA, satisfies each element of at least claim 1 of the '322 patent, literally or under the doctrine of equivalents. On information and belief, the other '322 Accused Products are also manufactured by a NVIDIA Foundry Partner (e.g., TSMC) on behalf of NVIDIA and satisfy each element of at least claim 1 of the '322 patent, literally or under the doctrine of equivalents.

57. On information and belief, the '322 Accused Products are neither materially changed by subsequent processes nor become trivial and nonessential components of another product.

58. On information and belief, at least as of the date of service of this Complaint, NVIDIA has induced and continues to induce others actively, knowingly, and intentionally, including its suppliers and contract manufacturers, to infringe one or more claims of the '322 patent, including, but not limited to, claim 1, pursuant to 35 U.S.C. § 271(b), by actively encouraging others to import into the United States, and/or make, use, sell, and/or offer to sell in the United States, the '322 Accused Products or products containing the infringing semiconductor components of the '322 Accused Products, by actively inducing others to infringe the '322 patent by making, using, selling, offering for sale, marketing, advertising, and/or importing the Accused Products to their customers for use in downstream products that infringe, or were manufactured using processes that infringe, the '322 patent, and by instructing others to infringe the '322 patent.

59. For example, NVIDIA actively promotes the sale, use, and importation of the '322 Accused Products in marketing materials, technical specifications, data sheets, web pages on its website (e.g., www.nvidia.com), press releases, training tutorials, development and design tools, user manuals, and developer forums as well as at trade shows (e.g., the Consumer Technology Association's Consumer Electronics Show ("CES")) and NVIDIA's online Discussion Forums for GeForce products and developers) and through its sales and distribution channels that encourage infringing uses, sales, offers to sell, and importation of the '322 Accused Products. As another example, NVIDIA's representatives travel to customer sites in the United States for sales and support activity that includes working with customers to facilitate these customers' infringing testing, marketing, importation, and sales activity. On information and belief, NVIDIA supplies customers with '322 Accused Products so that they may be used, sold, or offered for sale by those customers. For example, NVIDIA provides direct sales to original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales to customers in the United States. NVIDIA also promotes, publicly on its website, uses of the '322 Accused Products by customers in the United States. NVIDIA additionally provides a wide range of technical support to customers and businesses, including product-specific solutions. NVIDIA also encourages customers and other third parties to communicate directly with NVIDIA representatives about these products for purposes of technical assistance and repair (e.g., <https://www.nvidia.com/en-us/support/enterprise/> and <https://www.nvidia.com/en-us/support/consumer/>).

60. On information and belief, NVIDIA sells or offers for sale the '322 Accused Products to third parties that incorporate the '322 Accused Products into third party products ("the '322 Third Party Products").

61. On information and belief, NVIDIA assists third parties, directly and/or through intermediaries, in the development of the '322 Third Party Products and provides technical support and supports the sales of the '322 Third Party Products.

62. On information and belief, since at least as of the date of service of this Complaint, NVIDIA has induced and continues to induce third parties with specific intent or willful blindness to import, make, use, sell, and/or offer to sell '322 Third Party Products that include at least one '322 Accused Product, whose make, use, sale, offer for sale, or importation constitutes direct infringement of at least one claim of the '322 patent.

63. On information and belief, the '322 Third Party Products are imported into the United States for use, sale, and/or offer for sale in this District and throughout the United States ("Imported '322 Third Party Products").

64. On information and belief, to the extent any entity other than NVIDIA, including but not limited to any of NVIDIA's Foundry Partners or third-party importers, imports the '322 Accused Products and/or Imported '322 Third-Party Products into the United States for or on behalf of NVIDIA ("Third Party Importer"), NVIDIA is liable for inducement of infringement by the Third Party Importer. NVIDIA has encouraged the Third Party Importer to infringe the '322 patent and intended that it do so. This encouragement includes at least ordering or instructing the Third Party Importer to import the '322 Accused Products and/or '322 Third-Party Products into the United States, providing directions and other materials to the Third Party Importer to enable such importation, and/or conditioning the receipt of benefits (included but not limited to payment) to the Third Party Importer on such importation. On information and belief, this behavior has continued since Defendant first became aware of the '322 patent and the infringement thereof.

65. On information and belief, to the extent any entity other than NVIDIA, including but not limited to any of NVIDIA's Foundry Partners, uses the patented method to fabricate or manufacture the '322 Accused Products and/or Imported '322 Third-Party Products in the United States for or on behalf of NVIDIA ("Third Party Manufacturer"), NVIDIA is liable for inducement of infringement by the Third Party Manufacturer. NVIDIA has encouraged the Third Party Manufacturer to infringe the '322 patent and intended that it do so. This encouragement includes, without limitation, ordering the '322 Accused Products from the Third Party Manufacturer since Defendant first became aware of the '322 patent and its infringement by the Third Party Manufacturer.

66. NVIDIA has benefitted and continues to benefit from the importation into the United States of the '322 Accused Products, '322 Third Party Products, and Imported '322 Third Party Products.

67. Ocean Semiconductor has suffered, and continues to suffer, damages as a result of NVIDIA's infringement of the '322 patent.

68. At least as of the date of service of this Complaint, NVIDIA has infringed the '322 patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights, at least by performing acts of infringement with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Plaintiff is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

69. Ocean Semiconductor reserves the right to modify its infringement theories as discovery progresses in this case. Ocean Semiconductor shall not be estopped or otherwise limited or restricted for purposes of its infringement contentions or its claim constructions by the claim

charts that it provides with this Complaint. Ocean Semiconductor intends for the claim chart (Exhibit 5) for the '322 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Ocean Semiconductor's preliminary or final infringement contentions or preliminary or final claim construction positions.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 7,629,211

70. Plaintiff incorporates by reference the foregoing paragraphs of this Complaint as if fully set forth herein.

71. At least as of the date of service of this Complaint, Ocean Semiconductor placed NVIDIA on actual notice of the '211 patent and actual notice that its actions constituted and continued to constitute infringement of the '211 patent. NVIDIA has had actual knowledge of the '211 patent and its own infringement of the '211 patent since at least that time.

72. On information and belief, NVIDIA has directly infringed and continues to infringe at least claim 1 of the '211 patent literally or under the doctrine of equivalents, by importing into the United States, and/or using, and/or selling, and/or offering for sale in the United States, without authority or license, integrated circuits that that are designed, developed, fabricated, and/or manufactured by a process including all of the limitations of at least claim 1 of the '211 patent, and systems, products, and/or devices containing these integrated circuits including at least the NVIDIA Accused Products ("211 Accused Products") in violation of 35 U.S.C. § 271. The '211 Accused Products are manufactured by a process including all of the limitations of at least claim 1 of the '211 patent.

73. Discovery is expected to uncover the full extent of NVIDIA's infringement of the '211 patent beyond the '211 Accused Products already identified herein.

74. Specifically, on information and belief, NVIDIA has directly infringed and continues to infringe at least claim 1 of the '211 patent literally or under the doctrine of equivalents, by importing into the United States, and/or using, and/or selling, and/or offering for sale in the United States, without authority or license, the '211 Accused Products, in violation of 35 U.S.C. § 271(g). On information and belief, NVIDIA imports the '211 Accused Products into the United States for sale and distribution to customers located in the United States. On information and belief, NVIDIA sells and/or offers for sale the '211 Accused Products in the United States. For example, NVIDIA provides direct sales through its own sales channels and/or its distributors or contract manufacturers and sells the '211 Accused Products to businesses including original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales of the '211 Accused Products in the United States. On information and belief, NVIDIA offers the '376 Accused Products for sale in the United States. For example, NVIDIA engages in sales, marketing, and contracting activity in the United States and/or with United States offices of its customers.

75. The '211 Accused Products are manufactured by a process including all of the limitations of at least claim 1 of the '211 patent. For example, during the manufacture of the '211 Accused Products, a field effect transistor is formed. During manufacture, a semiconductor substrate is provided, and a gate electrode is formed above the semiconductor substrate. At least one cavity in the substrate adjacent the gate electrode is formed, and a strain-creating element is formed in the at least one cavity. The strain-creating element formed comprises a compound material comprising a first chemical element and a second chemical element. The first chemical element comprises one of germanium and carbon, the second chemical element comprises silicon, and the semiconductor substrate comprises the second chemical element. The strain-creating

element further comprises a first portion and a second portion, wherein the second portion is located above the first portion. The strain-creating element further comprises a first concentration ratio between a concentration of the first chemical element in the first portion and a concentration of the second chemical element in the first portion. The strain-creating element further comprises a second concentration ratio between a concentration of the first chemical element in the second portion and a concentration of the second chemical element in the second portion. The first concentration ratio is smaller than said second concentration ratio, and a ratio between a concentration of the first chemical element and a concentration of the second chemical element increases in a vertical direction with increasing distance from a bottom surface of the at least one cavity formed in the substrate.

76. Attached hereto as Exhibit 6, and incorporated by reference herein, is a claim chart detailing how the NVIDIA GeForce RTX 2070 Super (TU104 GPU based on Turing architecture and made using a 12 nm production process at TSMC), which is manufactured by a NVIDIA Foundry Partner (TSMC) on behalf of NVIDIA, satisfies each element of at least claim 1 of the '211 patent, literally or under the doctrine of equivalents. On information and belief, the other '211 Accused Products are also manufactured by a NVIDIA Foundry Partner (e.g., TSMC) on behalf of NVIDIA and satisfy each element of at least claim 1 of the '211 patent, literally or under the doctrine of equivalents.

77. On information and belief, the '211 Accused Products are neither materially changed by subsequent processes nor become trivial and nonessential components of another product.

78. On information and belief, at least as of the date of service of this Complaint, NVIDIA has induced and continues to induce others actively, knowingly, and intentionally,

including its suppliers and contract manufacturers, to infringe one or more claims of the '211 patent, including, but not limited to, claim 1, pursuant to 35 U.S.C. § 271(b), by actively encouraging others to import into the United States, and/or make, use, sell, and/or offer to sell in the United States, the '211 Accused Products or products containing the infringing semiconductor components of the '211 Accused Products, by actively inducing others to infringe the '376 patent by making, using, selling, offering for sale, marketing, advertising, and/or importing the Accused Products to their customers for use in downstream products that infringe, or were manufactured using processes that infringe, the '211 patent, and by instructing others to infringe the '211 patent.

79. For example, NVIDIA actively promotes the sale, use, and importation of the '211 Accused Products in marketing materials, technical specifications, data sheets, web pages on its website (e.g., www.nvidia.com), press releases, training tutorials, development and design tools, user manuals, and developer forums as well as at trade shows (e.g., the Consumer Technology Association's Consumer Electronics Show ("CES")) and NVIDIA's online Discussion Forums for GeForce products and developers) and through its sales and distribution channels that encourage infringing uses, sales, offers to sell, and importation of the '211 Accused Products. As another example, NVIDIA's representatives travel to customer sites in the United States for sales and support activity that includes working with customers to facilitate these customers' infringing testing, marketing, importation, and sales activity. On information and belief, NVIDIA supplies customers with '211 Accused Products so that they may be used, sold, or offered for sale by those customers. For example, NVIDIA provides direct sales to original equipment manufacturers and electronic manufacturing service providers. On information and belief, these direct sales include sales to customers in the United States. NVIDIA also promotes, publicly on its website, uses of the '211 Accused Products by customers in the United States. NVIDIA additionally provides a

wide range of technical support to customers and businesses, including product-specific solutions. NVIDIA also encourages customers and other third parties to communicate directly with NVIDIA representatives about these products for purposes of technical assistance and repair (e.g., <https://www.nvidia.com/en-us/support/enterprise/> and <https://www.nvidia.com/en-us/support/consumer/>).

80. On information and belief, NVIDIA sells or offers for sale the '211 Accused Products to third parties that incorporate the '211 Accused Products into third party products ("the '211 Third Party Products").

81. On information and belief, NVIDIA assists third parties, directly and/or through intermediaries, in the development of the '211 Third Party Products and provides technical support and supports the sales of the '211 Third Party Products.

82. On information and belief, since at least as of the date of service of this Complaint, NVIDIA has induced and continues to induce third parties with specific intent or willful blindness to import, make, use, sell, and/or offer to sell '211 Third Party Products that include at least one '211 Accused Product, whose make, use, sale, offer for sale, or importation constitutes direct infringement of at least one claim of the '211 patent.

83. On information and belief, the '211 Third Party Products are imported into the United States for use, sale, and/or offer for sale in this District and throughout the United States ("Imported '211 Third Party Products").

84. On information and belief, to the extent any entity other than NVIDIA, including but not limited to any of NVIDIA's Foundry Partners or third-party importers, imports the '211 Accused Products and/or Imported '211 Third-Party Products into the United States for or on behalf of NVIDIA ("Third Party Importer"), NVIDIA is liable for inducement of infringement by

the Third Party Importer. NVIDIA has encouraged the Third Party Importer to infringe the '211 patent and intended that it do so. This encouragement includes at least ordering or instructing the Third Party Importer to import the '211 Accused Products and/or '211 Third-Party Products into the United States, providing directions and other materials to the Third Party Importer to enable such importation, and/or conditioning the receipt of benefits (included but not limited to payment) to the Third Party Importer on such importation. On information and belief, this behavior has continued since Defendant first became aware of the '211 patent and the infringement thereof.

85. On information and belief, to the extent any entity other than NVIDIA, including but not limited to any of NVIDIA's Foundry Partners, uses the patented method to fabricate or manufacture the '211 Accused Products and/or Imported '211 Third-Party Products in the United States for or on behalf of NVIDIA ("Third Party Manufacturer"), NVIDIA is liable for inducement of infringement by the Third Party Manufacturer. NVIDIA has encouraged the Third Party Manufacturer to infringe the '211 patent and intended that it do so. This encouragement includes, without limitation, ordering the '211 Accused Products from the Third Party Manufacturer since Defendant first became aware of the '211 patent and its infringement by the Third Party Manufacturer.

86. NVIDIA has benefitted and continues to benefit from the importation into the United States of the '211 Accused Products, '376 Third Party Products, and Imported '211 Third Party Products.

87. Ocean Semiconductor has suffered, and continues to suffer, damages as a result of NVIDIA's infringement of the '211 patent.

88. At least as of the date of service of this Complaint, NVIDIA has infringed the '376 patent knowingly, willfully, deliberately, and in disregard of Plaintiff's patent rights, at least by

performing acts of infringement with actual knowledge of its direct and indirect infringement or while remaining willfully blind to the fact of its direct and indirect infringement. As a result of at least this conduct, Plaintiff is entitled to enhanced damages under 35 U.S.C. § 284 and to attorneys' fees and costs under 35 U.S.C. § 285.

89. Ocean Semiconductor reserves the right to modify its infringement theories as discovery progresses in this case. Ocean Semiconductor shall not be estopped or otherwise limited or restricted for purposes of its infringement contentions or its claim constructions by the claim charts that it provides with this Complaint. Ocean Semiconductor intends for the claim chart (Exhibit 6) for the '211 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Ocean Semiconductor's preliminary or final infringement contentions or preliminary or final claim construction positions.

PRAYER FOR RELIEF

WHEREFORE, Ocean Semiconductor prays for judgment against NVIDIA as follows:

- A. A judgment that Defendant NVIDIA has infringed, and continues to infringe, one or more claims of each of the Asserted Patents;
- B. A judgment that Defendant NVIDIA has induced infringement, and continues to induce infringement, of one or more claims of each of the Asserted Patents;
- C. A judgment that Defendant NVIDIA has contributed to, and continues to contribute to, the infringement of one or more claims of each of the Asserted Patents;
- D. A judgment awarding Ocean Semiconductor damages to be paid by Defendant NVIDIA in an amount to be proven at trial adequate to compensate Ocean Semiconductor for NVIDIA's past infringement and any continuing or future infringement through the date such judgment is entered, but in no event less than a reasonable royalty for NVIDIA's infringement;

- E. A judgment awarding Ocean Semiconductor treble damages pursuant to 35 U.S.C. § 284 as a result of Defendant NVIDIA's willfulness;
- F. A judgment and order finding that this case is exceptional and awarding Ocean Semiconductor its reasonable attorneys' fees to be paid by Defendant NVIDIA pursuant to 35 U.S.C. § 285;
- G. A judgment awarding expenses, costs, and disbursements in this action against Defendant NVIDIA, including pre-judgment and post-judgment interest;
- H. A judgment granting a preliminary and permanent injunction that restrains and enjoins NVIDIA, its officers, directors, employees, agents, servants, parents, subsidiaries, successors, assigns, and all those in privity, concert or participation with them from directly or indirectly infringing the Asserted Patents; and
- I. A judgment awarding Ocean Semiconductor such other relief as the Court may deem just and equitable.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38(b), Plaintiff hereby demands a trial by jury on all issues so triable.

Dated: February 25, 2022

Respectfully submitted,

/s/ Taylor N. Mauze

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